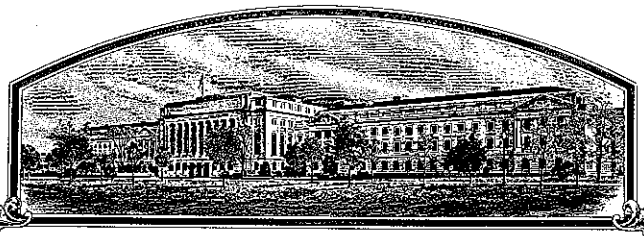

No. 9600329

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

University of Maryland

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL D BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF TIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Wicomico'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirtieth day of July in the year of our Lord one thousand nine hundred and ninety-nine.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
University of Maryland

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
Md 87-5389

3. VARIETY NAME
Wicomico

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Office of Technology Liaison
4312 Knox Road
College Park, MD 20742

5. TELEPHONE *(include area code)*
301-405-4209

6. FAX *(include area code)*
301-314-9871

FOR OFFICIAL USE ONLY

PVPO NUMBER 9600329

FILING DATE 7 Aug 1996

FILING AND EXAMINATION FEE $ 2450.00

FEE RECEIVED DATE 08/08/96

CERTIFICATION FEE $ 300

DATE 9/16/96

7. GENUS AND SPECIES NAME
Glycine max (L.) Merr.

8. FAMILY NAME *(Botanical)*
Leguminosae

9. CROP KIND NAME *(Common name)*
Soybean

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.) (Common name)*
State Experiment Station

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

12. DATE OF INCORPORATION

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Mr. Wayne E. Swann
Office of Technology Liaison
4312 Knox Road
College Park, MD 20742

14. TELEPHONE *(include area code)*
301-405-7506

15. FAX *(include area code)*
301-314-9871

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. [X] Exhibit A. Origin and Breeding History of the Variety
b. [X] Exhibit B. Statement of Distinctness
c. [X] Exhibit C. Objective Description of the Variety
d. [ ] Exhibit D. Additional Description of the Variety
e. [X] Exhibit E. Statement of the Basis of the Applicant's Ownership
f. [X] Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)*
g. [X] Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
[X] YES *(If "yes," answer items 18 and 19 below)* [ ] NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
[X] YES [ ] NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
[X] FOUNDATION [X] REGISTERED [X] CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
[X] YES *(If "yes," give names of countries and dates)* [ ] NO
U.S. release date - August 15, 1995

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
Wayne E Swann			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Mr. Wayne E. Swann			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Executive Director, OTL	8/7/96		

SD-470 (04-95) *(Previous editions are to be destroyed)* *(See reverse for instructions and information collection burden statement)*

EXHIBIT A - ORIGIN AND BREEDING HISTORY

'WICOMICO' SOYBEAN

WICOMICO is a F4-derived plant selection from the cross of D77-18 X D77-5169. D77-18 was a selection from a cross of Tracy X Forrest made at the USDA station in Stoneville, MS. D77-5169 was a selection from a cross of Centennial X J74-47 made at the USDA station in Stoneville, MS. J74-47 has the same parentage as Bedford.

The original cross was made at the Wye Research and Education Center, Queenstown, MD, during the summer of 1983. The F1 plants were grown in the University of Maryland greenhouse complex to produce F2 seeds. The F2 progeny were advanced to the F4 generation by single seed descent in Maryland and Puerto Rico. F4-derived lines were evaluated in Maryland in 1987, and Md 87-5389 was identified as having a desirable plant type, resistance to a field population of cyst nematodes, and uniform plant height, flower color, and pubescence color. Md 87-5389 was tested for yielding ability in Maryland during 1988, in the Mid-Atlantic Regional Tests during 1989, and in the Southern Regional Soybean Tests, Preliminary Group V, during 1990. WICOMICO has been evaluated in Maryland since 1992.

Breeder seed was produced by mass selection of uniform plant types from a bulk population of the original F4 plant row. Md 87-5389 was designated WICOMICO, and foundation seed was produced in 1995 by the Maryland Crop Improvement Association. Foundation seed will be distributed to certified seed growers for planting in 1996.

Observations indicate WICOMICO is uniform and stable within commercially acceptable limits. Foundation seed of WICOMICO can contain up to 0.05% of plants with white flowers and up to 0.15% of plants with gray pubescence and seeds having buff or brown hila. The stability of WICOMICO is demonstrated by the data shown below from the Maryland State Variety Tests from 1992 to 1994.

Cultivar	Seed Yield		Mat	Ht	Seed				
	FS(6)	DC(7)			Lod	Qual	Size	Oil	Pro
	----Bu/A---		Day	In	---Score--		g/100	----%-----	
WICOMICO	40.8	41.1	140	32	3.3	1.6	13.6	17.0	42.3
Manokin	45.5	40.9	137	33	3.3	1.5	11.6	18.3	39.1
Essex	41.8	39.9	137	28	2.8	1.2	11.1	17.2	42.8
Hutcheson	42.9	42.8	144	32	2.9	1.4	10.7	18.3	39.9
Hartwig	34.4	35.5	144	31	3.5	2.1	10.9	17.7	39.7

Seed Yield: FS=Full season tests (6 tests); DC=Double crop tests (7 tests)
Mat= Maturity, Ht=Mature plant height, Lod=Lodging, Qual=Quality, Pro=Protein. Protein and oil content are on a dry-weight basis.
Score: 1= Best to 5= Poor.

9600329

EXHIBIT B - NOVELTY STATEMENT

'WICOMICO' SOYBEAN

To our knowledge WICOMICO most nearly resembles Manokin and Hartwig. Differences include, but are not necessarily restricted to the following:

WICOMICO can be distinguished from Manokin as follows:

1. Wicomico is 3 days later in maturity than Manokin.
2. Wicomico (14 g/100 seeds) has larger seed than Manokin (12 g/100 seeds).
3. Wicomico (42.3 %) has higher seed protein than Manokin (39.1 %).

WICOMICO can be distinguished from Hartwig as follows:

1. Wicomico is 4 days earlier in maturity than Hartwig.
2. Wicomico (14 g/100 seeds) has larger seed than Hartwig (11 g/100 seeds).
3. Wicomico (42.3 %) has higher seed protein than Hartwig (39.7 %).
4. Wicomico has resistance to races 1 and 3 of the soybean cyst nematode (Heterodera glycines Inchinohe), but Hartwig has resistance to all known races of cyst nematode.

UNITED STATES DEPARTMENT OF AGRICULTURE, AGRICULTURAL MARKETING SERVICE, SCIENCE DIVISION
PLANT VARIETY PROTECTION OFFICE
10301 BALTIMORE BLVD., RM. 500, NATIONAL AGRICULTURAL LIBRARY BUILDING
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF SOYBEAN VARIETY
(PVP APPLICATION EXHIBIT "C")

Glycine max (L.)Merr.

Name of Applicant:
University of Maryland

Variety Name: Wicomico

Experimental Name (if applicable): *(very important if one has ever been used):* Md 87-5389

Address (Street and No., City, State, Zip Code):
Office of Technology Liaison
4312 Knox Road
College Park, MD 20742

PLEASE DO NOT WRITE IN THIS SPACE
FOR PVP OFFICE USE ONLY

PVP NUMBER: _____

For each characteristic, please place the number of the character state that best represents your variety in the corresponding box. If you feel the best choice is not listed, write in what you believe to be the most accurate description.

1. [SSHP]:SEED SHAPE	1=[SPHR] spherical: (L/W, L/T, and T/W ratios = < 1.2)	2=[SPHF] spherical-flattened: (L/W ratio > 1.2; L/T ratio < 1.2	3=[ELON] elongate: (L/T ratio > 1.2; T/W < 1.2	4=[ELFL] elongate-flattened: (L/T ratio > 1.2; T/W > 1.2)
[2]				

2. [SCL]:SEED COAT COLOR:

[1] 1=[YEL]yellow 2=[GRN]green 3=[BRN]brown 4=[BLK]black
5=[OTH]other *(please specify)* _____

3. [LU]:SEED COAT LUSTER

[1] 1=[DL]dull 2=[SH]shiny

4. [SSZ]:SEED SIZE: [1] [4] grams/100 seeds

5. [HCL]:HILUM COLOR:

[6] 1=[BUF]buff 2=[YEL]yellow 3=[BRN]brown 4=[GRY]gray 5=[IBL]imperfect black
6=[BLA]black 7=[OTH]Other *(please specify)* _____

6. [CCL]:COTYLEDON COLOR

[1] 1=[YEL]yellow 2=[GRN]green

7. [PA]:SEED PROTEIN PEROXIDASE ACTIVITY

[1] 1=[LO]low 2=[HI]high

8. [P]:SEED PROTEIN ELECTROPHORETIC BAND

[ ] 1=[A]Type A 2=[B]Type B

9. [HC]:HYPOCOTYL COLOR	1=[GRN]green ('Evans'; 'Davis')	2=[GB]green with bronze band below cotyledons ('Woodworth'; 'Tracy')	3=[LPR]light purple below cotyledons ('Beeson'; Pickett 71')	4=[DPR]dark purple extending to unifoliolate leaves (Hodgson'; 'Coker Hampton 266A')
[3]				

10. [SP]:LEAFLET SHAPE

[3] 1=[LN]lanceolate 2=[OL]oval 3=[OV]ovate 4=[OTH]other (specify) e.g., [CB]=oblong [EP]=elliptical _____

SOYBEAN EXHIBIT "C": *Glycine max* (L.)Merr. (page 2 of 4)

11. [FCL]:FLOWER COLOR

[2] 1=[WHI]white 2=[PUR]purple 3=[WPT]white w/purple throat

12. [PCL]:POD COLOR

[1] 1=[TAN]tan 2=[BRN]brown 3=[BLA]black

13. [PBC]:PLANT PUBESCENCE COLOR

[3] 1=[GRY]gray 2=[BRN]brown 3=[TWN]tawny 4=[LTN]light tawny

14. [PHB]:PLANT HABIT

[1] 1=[DET]determinate ('Gnome'; 'Braxton') 2=[SDT]:semi-determinate ('Will')
3=[IND]indeterminate ('Nebsoy'; 'Improved Pelican') 4=[INT]:intermediate

15. [MAT]:MATURITY GROUP

[8] 1=000 2=00 3=0 4=I 5=II 6=III 7=IV 8=V 9=VI 10=VII 11=VIII 12=IX 13=X

16. [MATS]:MATURITY SUBGROUP (early) 1 2 3 4 5 6 7 8 9 (late)

[3]

17. DISEASE REACTION **(Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant)**

BACTERIAL DISEASES

[0] [BCPS]:Bacterial Pustule *(Xanthomonas phaseoli var. sojensis)*

[0] [BCBL]:Bacterial Blight *(Pseudomonas glycinea)*

[0] [WDFR]:Wildfire Blight *(Pseudomonas tabaci)*

FUNGAL DISEASES

[0] [BRSP]:Brown Spot *(Septoria glycines)*

[FGEY]:Frogeye Leafspot *(Cercospora sojina)*

[0] [FG01]race1 [ ] [FG02]race2 [ ] [FG03]race3 [ ] [FG04]race4 [ ] [FG05]race5 [ ] [FG06]race6
[ ] [FG0O]:other *(please specify* _____)

[0] [TRSP]:Target Spot *(Corynespora cassiicola)*

[0] [DYML]:Downey Mildew (*Peronospora trifoliorum* var. *manchurica*)

[0] [PWML]:Powdery Mildew *(Microsphaera diffusa)*

[0] [BRSR]:Brown Stem Rot *(Cephalosporium gregatum)*

[2] [STCR]:Stem Canker *(Diaporthe phaseolorum var. caulivora)*

[0] [PSBL]:Pod and Stem Blight *(Diaporthe phaseolorum var. sojae)*

[0] [PRST]:Purple Seed Stain *(Cercospora kikuchii)*

S O Y B E A N E X H I B I T "C": *Glycine max* (L.)Merr. (page 3 of 4)

(Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant)

[0] [RZRT]:Rhizoctonia Root Rot *(Rhizoctonia solani)*

[PYPH]:Phytophthora Root Rot *(Phytophthora megasperma* Drechs. f. sp. *glycinea)*

[0] [PY01]:race 1 [ ] [PY02]:race 2 [ ] [PY03]:race 3 [ ] [PY04]:race 4 [ ] [PY05]:race 5

[ ] [PY06]:race 6 [ ] [PY07]:race 7 [ ] [PY08]:race 8 [ ] [PY09]:race 9 [ ] [PY10]:race 10

[ ] [PY11]:race 11 [ ] [PY12:]race 12 [ ] [PY13]:race 13 [ ] [PY14]:race 14 [ ] [PY15]:race 15

[ ] [PY16]:race 16 [ ] [PY17]:race 17 [ ] [PY18]:race 18 [ ] [PY19]:race 19 [ ] [PY20]:race 20

[ ] [PY21]:race 21 [ ] [PY22]:race 22 [ ] [PY23]:race 23 [ ] [PY24]:race 24 [ ] [PY25]:race 25

[ ] [PY26]:race 26 [ ] [OTHD]:other *(please specify)* _____

V I R A L D I S E A S E S

[0] [BDBL]:Bud Blight (Tobacco Ringspot Virus)

[0] [BYMO]:Yellow Mosaic (Bean Yellow Mosaic Virus)

[0] [CWCV]:Cowpea Mosaic (Cowpea Chlorotic Virus)

[0] [PDML]:Pod Mottle (Bean Pod Mottle Virus)

[0] [SDMT]:Seed Mottle (Soybean Mosaic Virus)

N E M A T O D E S

[SYCY]:Soybean Cyst Nematode *(Heterodera glycines)*

[2] [SY01]:race 1 [0] [SY02]:race 2 [2] [SY03]:race 3 [0] [SY05]:race 5

[0] [SY06]:race 6 [0] [SY09]:race 9 [0] [SY14]:race 14 *(formerly race 4)*

[ ] [SY0o]:other race *(specify)* _____

[0] [LANC]:Lance Nematode *(Hoplolaimus columbus)*

[0] [RTKN]:Southern Root Knot Nematode *(Meloidogyne incognita)*

[0] [NTKN]:Northern Root Knot Nematode *(Meloidogyne hapla)*

[0] [PTKN]:Peanut Root Knot Nematode *(Meloidogyne arenaria)*

[0] [RENM]:Reniform Nematode *(Rotylenchus reniformus)* [ ] [OTHD]:other *(specify* _____*)*

SOYBEAN EXHIBIT "C": *Glycine max* (L.)Merr. (page 4 of 4)

20. PHYSIOLOGICAL RESPONSES: (Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant)

[0] [CHLO]:Iron Chlorosis on Calcareous Soil

[ ] other *(please specify* _____*)*

INSECTS

21. INSECT REACTIONS: (Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant)

[0] [MXBB]:Mexican Bean Beetle *(Epilachna varivestis)*

[0] [POTH]:Potato Leaf Hopper *(Empoasca abae)*

[ ] [OTHI]: other *(please specify* _____*)*

HERBICIDES

22. HERBICIDE RESISTANCE: (Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant)

[0] [MEZN]:Metribuzin

[0] [SULF]:Sulfonylurea

[0] [RNDP]:Roundup

[ ] [OTHH]:other *(please specify* _____*)*

ADDITIONAL INFORMATION

Please add any additional information characteristic of your variety that you feel is pertinent. This information may be continued on additional pages and/or in the exhibit D.

Salt tolerance equivalent to 'Lee'.

EXHIBIT E - STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

The variety WICOMICO was developed by Dr. William J. Kenworthy, an employee of the University of Maryland at College Park. As a current employee of the University of Maryland, Dr. Kenworthy is under obligation to assign ownership of crop varieties or germplasm developed during his employment to the University of Maryland. No rights to such varieties or germplasm are retained by the employee. The Office of Technology Liaison is responsible for managing the intellectual property of the University of Maryland.